

DM4AI Working Group Repository

A supercomputing center perspective

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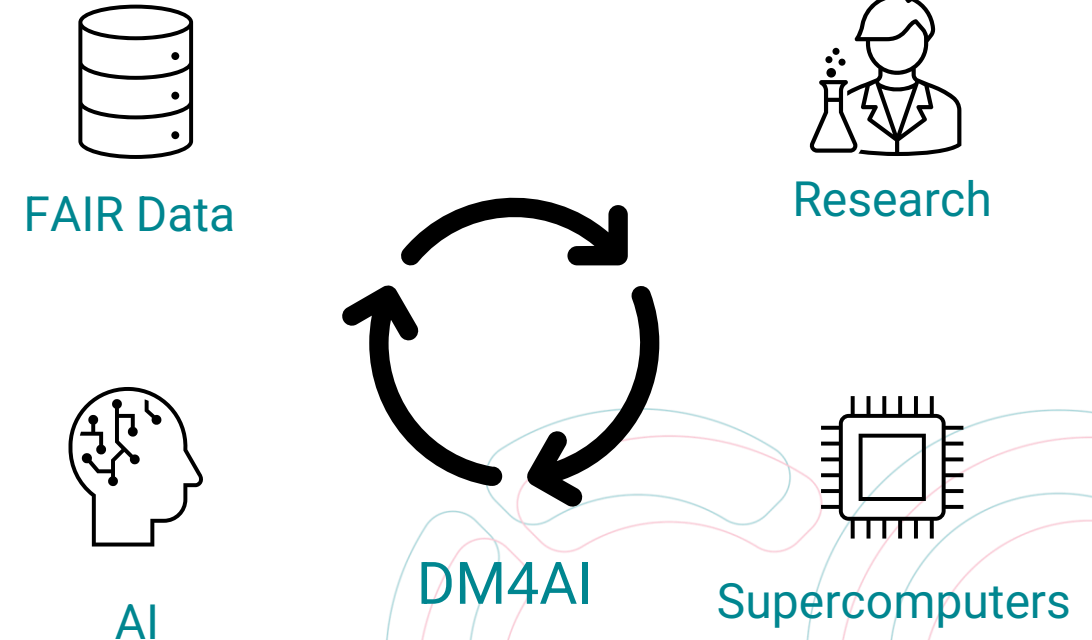
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DM4AI Repository

- Links **raw data** to **computing infrastructures**
- A data repository with **AI-specific** features
- Training and inference at the click of a button
- AI metadata for data and AI models
- AI model provenance and licensing
- A user-friendly web interface



Current State and Requirements

- Established **repository systems** exist (e.g. DSpace, Invenio RDM)
 - Established **repositories** exist
 - Powerful **computing infrastructures** exist (e-INFRA CZ, EuroHPC)
 - The **NRP** repository platform
 - Data transfer and management within **IP-EOSC CZ**
- Strong **demand** for **AI** applications using existing data (including sensitive data)
 - Model training and fine-tuning
 - Inference, **RAG**
 - The need to comply with **FAIR** principles and all licences
 - Computing and data infrastructures are **technically challenging** to use

The Aim of the DM4AI Repository

Main objective

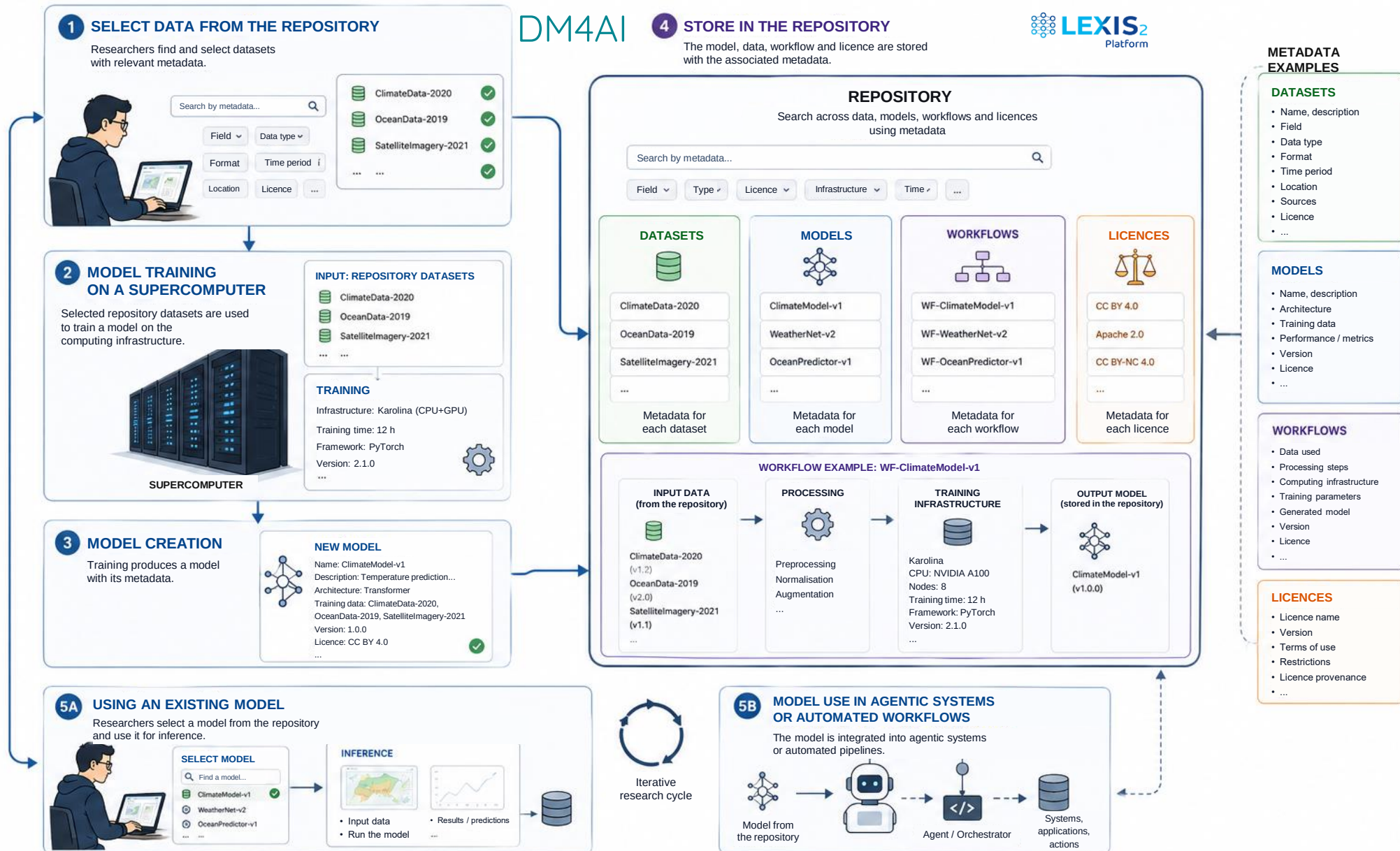
A domain-specific AI repository built on NRP infrastructure, with the planned use of NRP data storage located close to large-scale computing infrastructure

Inspiration

Platform components from Hugging Face and Roboflow

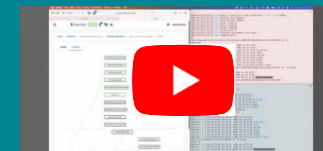
Enables **efficient sharing and management of AI/ML models, datasets and workflows**, with advanced tools for working with data and connectivity to national and international computing infrastructures (**LEXIS Platform**)

Based on the **CLARIN-DSpace** repository system



Thank you

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LEXIS Platform Demo
Workflow across 4 HPC systems

